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MONETARY EFFECTS OF FINANCING AGRICULTURAL EXPORTS

THROUGH PROGRAMS UNDER TITLES I AND IV, PUBLIC LAW 480

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CONTENTS

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SUMMARY

This report analyzes two methods of financing government-to-government sales of surplus agricultural commodities under Public Law 480: Sales for local currency under Title I, and sales for deferred dollar payment under Title IV.

The monetary effects on the recipient and supplying countries are important considerations in deciding which program will provide greater benefits to either or both countries. A P.L. 480 program under either Title can be planned to offset deflationary pressures within the recipient country, to contain inflationary pressures if they exist when local currency holdings are accumulated, or to have a neutral effect.

Two hypothetical case studies illustrate the effects of alternative programs. They show that Title I is likely to be more beneficial to the recipient country if: (1) official U.S. expenditures within the country are small; (2) expected earnings of dollar or other convertible exchange are meager, in both the short and the long run; and (3) payment in local currency can be made without causing instability in prices.

The Title IV method is more favorable to the recipient country if official U.S. expenditures are large enough to provide it with a net dollar surplus after deferred dollar repayment for the commodities.

In most cases, use of Title IV programs will result, in the short run, in adverse balance-of-payments effects for the United States. This can be partially, or fully, offset if the recipient country (1) makes a substantial downpayment, or (2) uses dollars received from official U.S. expenditures within the country to increase its dollar purchases from the United States, or to reduce the amount of dollars borrowed.

The decision to provide Title I or Title IV aid may depend upon whether the U.S. balance-of-payments situation is served best by obtaining currency of the recipient country--or deferred dollar payment with a sizeable downpayment.

MONETARY EFFECTS OF FINANCING AGRICULTURAL EXPORTS THROUGH PROGRAMS UNDER TITLES I AND IV, PUBLIC LAW 480

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Public Law 480 provides for the disposal of surplus U.S. agricultural commodities, either as grant, gift, barter, concessional sales for local currencies, or sales for dollars on various credit terms. The goals toward which the program has been broadly directed are to: (1) reduce and use constructively U.S. agricultural surpluses by expanding exports to low-income countries; (2) strengthen foreign agricultural trade and develop foreign markets; (3) accelerate economic development in the recipient countries for increased national and international security; and (4) provide higher nutritional standards for greater human energy potentials.

These are the author's definitions of goals which include, in broad terms, the various major objectives and advantages that proponents of P.L. 480 programs have enunciated. The Agricultural Trade Development and Assistance Act of 1954 summarized policy objectives of the law as follows: "to make maximum use of surplus agricultural commodities in furtherance of the foreign policy of the United States, and to stimulate and facilitate the expansion of foreign trade in agricultural commodities produced in the United States by providing a means whereby surplus agricultural commodities in excess of the usual marketings of such commodities may be sold through private trade channels, and foreign currencies accepted in payment therefor.

"It is further the policy to use foreign currencies which accrue to the United States under this Act to expand international trade, to encourage economic development, to purchase strategic materials, to pay United States obligations abroad, to promote collective strength, and to foster in other ways the foreign policy of the United States."

Authors of various articles have defined the goals severally: to increase human nutritional intake, stimulate permanent export markets for farm products, dispose of U.S. farm surpluses, increase the rate of economic development, improve the climate for foreign credit and investment, add to labor productivity, and--since the addition of Title IV--provide an intermediate mechanism between local currency sales and cash commercial sales, to name only a few.

The monetary complexities of Titles I (sales for local currencies) and IV (sales for dollars on a deferred payment basis) are several. These complexities, in a limited scope, are the subject of this paper. Titles II (famine relief and related programs) and III (nonprofit voluntary agencies and intergovernmental organizations and barter contracts) present none of the

monetary problems involved in deciding between Title I and Title IV programs and are not discussed. The paper is not concerned, except indirectly, with the relative advantages and disadvantages of the two titles from the points of view of the Commodity Credit Corporation and the U.S. Department of Agriculture (e.g. domestic farm program costs).

The subject divides itself logically into three parts: (1) the monetary effects of Title I programs in the recipient country and in the supplying country; (2) the monetary effects of Title IV in the recipient and in the supplying country; and (3) a comparison of the programs' monetary benefits to each country. Hypothetical illustrations are presented to appraise determinable potential effects of agreements in various situations in view of known alternative monetary impacts of Title I and Title IV. 1/

Title I of P.L. 480 authorizes the sale of surplus U.S. agricultural commodities against payment in local currencies. During the years of implementation of Title I, most (43 percent) of the currency receipts have been lent long term to the recipient countries to help finance economic development, as mutually agreed between recipients and the United States. An additional amount (33 percent) has been allocated for grants, common defense projects, and Cooley loans. The remainder (24 percent) has been reserved for U.S. uses (principally to defray diplomatic and military expenses expressed in the local unit of account). Local currencies deposited in payment for U.S. surplus commodities belong technically to the U.S. Government. The general uses of such currencies are specified when the sales agreement is made. That portion lent under Sec. 104(g) to the recipient country must be repaid with interest. Originally, the rate of interest was 3 percent with dollar repayment, or 4 percent with local currency repayment. Maturities extended up to 40 years. Interest rates may now be set as low as three-fourths of 1 percent with repayment of principal in periods up to 40 years with an effective grace period of 3 years. The law requires that the United States convert not less than 2 percent of the U.S. use funds into dollars.

Title IV of P.L. 480 provides long-term credit for dollar purchases of surplus agricultural commodities for domestic consumption during periods of economic development. Agreements are entered into with "friendly nations," including financial institutions acting in their behalf. The legislation assumes that manpower resources of such nations will, as a result, be utilized more effectively without "jeopardizing meanwhile adequate supplies of agricultural commodities for domestic use." Private trade is to be encouraged and dollar sales maximized. Payment is in dollars at rates of interest up to, but not in excess of, the cost of money to the U.S. Treasury, "taking into consideration the current average market yields on outstanding marketable

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1/ Throughout this study balance-of-payments effects are considered as monetary effects. No analysis is made of these effects upon domestic economies except as they bear upon the particular problems studied. Balance-of-payments surpluses should always benefit countries receiving P.L. 480 assistance and there would seem to be no need to sterilize surpluses which, in these developing economies, almost certainly lead to increased imports. The general effects of balance-of-payments surpluses or deficits upon the internal economies of the respective countries need no elaboration for the purposes of this study.

obligations of the United States having maturity comparable to the maturities of loans made by the President under this section." (Sec. 403 of Public Law 480, as amended.)

Under Title IV the recipient country thus pays in dollars and in reasonable annual amounts of periods not to exceed 20 years from the date of the last delivery of commodities in each calendar year under the agreement. A grace period of up to 2 years after date of last delivery is allowed. Legislative amendments to Title IV (in Title II of the Food and Agriculture Act of 1962, approved September 27, 1962) liberalized the payment provisions by authorizing the Secretary of Agriculture to allow the 2-year grace periods and to schedule the annual payments in reasonable rather than approximately equal amounts.

These amendments are intended to facilitate the use of Title IV, particularly in government-to-government sales agreements. Such grace periods or scheduling of repayments would be advisable because of a recipient's general financial status and balance-of-payments position or because of an especially heavy external debt-servicing burden in particular periods of Title IV repayments. In Title IV agreements covering supply periods of more than 1 year, the maximum payment period of 20 years would apply to the total amount to be repaid for shipments received in each calendar year under the agreement.

The long-term loan feature of Title IV permits the recipient country to use the <u>entire amount</u> of local currency generated from the sales domestically of the commodities received. The use of the total of local currency proceeds is one advantage of Title IV to the recipient country.

The relative monetary advantages of Title I and Title IV can be weighed and, depending upon the program agreed, can fall to the recipient country or the United States. The following analyses do not account for noneconomic forces. A political consideration, properly developed, can bring about a decision contrary to that reached on economic grounds. Political considerations are recognized but are not influencing in the following analyses.

<u>Saving of Storage Costs Common to Both Titles</u>

One item of saving to the United States upon disposal of surplus agricultural commodities can be accounted for here since the savings accrue under either Title I or Title IV, i.e. the saving of storage costs.

The storage of agricultural surpluses is a continuing and rising cost relative to the value of the commodities stored. To the extent that surplus commodities decline in value as a result of perishability or other causes, cost of storage relative to value rises more rapidly. The expectation of a price rise before ultimate disposal--the rise being large enough to offset or exceed the costs of storage--would provide economic justification for retention, an occurrence all but ruled out by definition of surplus. 2/ Thus,

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2/ A private trader may hold surplus commodities in storage to prevent a decline or force a rise in the prevailing market price. His action would be economically successful if he thereby increased his total revenue, (cont.)

assuming sales from surplus holdings of commodities are additional to commercial sales and would not have been made except under P.L. 480, disposal is desirable, the earlier the better, since CCC storage costs are reduced whenever disposal is accomplished. 3/

If disposal is under Title I, CCC cost is reduced by termination of storage costs on the goods disposed. To this extent, U.S. Government expenditures are reduced. The United States may realize additional savings through the balance-of-payments effects, as analyzed below in Section I and II. Realization of these savings will vary according to whether repayment is in dollars or in local currency and according to the schedule of repayment of Title I loans by the recipient country.

Under Title IV disposal, the dollar return--both principal and interest--for each agreement can be determined as shown by example in table 1. The net reduction of the maximum possible loss to CCC on each agreement, assuming the agreement is observed in all its terms by both partners, can also be calculated using the formula below.

Let: C = Cost to CCC, including storage
P = P.L. 480 sale price
I = Return from interest payments at rate charged
T = Cost of money to U.S. Treasury
S = Net saving to CCC, or net reduction in loss
L = Net loss to CCC

Then: $P + I - T = S$

And: $C - S = L$

Using the formula, the net saving (or net reduction in loss) and net loss to CCC can easily be computed. A P.L. 480 Title IV program of $15 million--if repaid over a 20-year period at three-fourths of 1 percent interest, with cost of money to the Treasury at 3-7/8 percent--would result in reducing

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2/ (cont.) after deducting storage costs for holding the commodities for the time required to bring about a change in the market price. Such an operation is not the intended goal of the U.S. Government as a holder of surplus commodities; surplus storage to maintain farm income is the primary economic justification of the Government's action.

3/ Theodore W. Schultz has made a good case in arguing that costs to the United States of P.L. 480 products may be zero when such costs are measured in terms of marginal revenue foregone from foreign sales, provided U.S. farm programs and agricultural production are treated as constants. If such a measurement is valid, any receipt from the sale of P.L. 480 products would be counted a profit. If Schultz's argument is accepted, other countries in addition to the United States have benefited from P.L. 480 (5).

Underscored figures in parentheses refer to items in Literature Cited, p 28.

Table 1.--Repayment schedule on 20-year Title IV commodity loan, $1 million at maximum and minimum interest rates 1/

Annual repayment periods	Annual principal payment	3-7/8% interest rate		3/4 of 1% interest rate	
		Interest	Total payment	Interest	Total payment
	U.S. dollars				
1.	50,000	38,750	88,750	7,500	57,500
2.	50,000	36,813	86,813	7,125	57,125
3.	50,000	34,875	84,875	6,750	56,750
4.	50,000	32,938	82,938	6,375	56,375
5.	50,000	31,000	81,000	6,000	56,000
6.	50,000	29,062	79,062	5,625	55,625
7.	50,000	27,125	77,125	5,250	55,250
8.	50,000	25,188	75,188	4,875	54,875
9.	50,000	23,250	73,250	4,500	54,500
10.	50,000	21,312	71,312	4,125	54,125
11.	50,000	19,375	69,375	3,750	53,750
12.	50,000	17,438	67,438	3,375	53,375
13.	50,000	15,500	65,500	3,000	53,000
14.	50,000	13,562	63,562	2,625	52,625
15.	50,000	11,625	62,625	2,250	52,250
16.	50,000	9,688	59,688	1,875	51,875
17.	50,000	7,750	57,750	1,500	51,500
18.	50,000	5,812	55,812	1,125	51,125
19.	50,000	3,875	53,875	750	50,750
20.	50,000	1,938	51,938	375	50,375
Total	1,000,000	406,876	2/ 1,406,876	78,750	2/ 1,078,750

1/ The maximum interest rate cannot exceed the cost of the funds to the U.S. Treasury, taking into consideration the current average market yields on outstanding marketable obligations of the United States having a maturity comparable to that of a Title IV loan.

2/ To determine cost of a given program for a 20-year period, multiply total by amount of program in millions. Grace periods are not provided for in the table; in the event of grace periods the amounts of annual payments will change, but variance in total cost will not be significant, although there will be slight increases. This table assumes equal annual payments. To the extent reasonable rather than equal annual payments are provided the amounts annually repaid will vary from those given above, but total payment will not change significantly.

the CCC loss by $10 million. Net loss would be $10 million compared with a loss otherwise of $20 million plus. 4/ This assumes that CCC would not otherwise have disposed of the $20 million surplus.

I

Title I--Sales for Foreign Currency

Recipient countries see in Title I a saving of foreign exchange. Conversely, these countries see a loss of foreign exchange in the dollar repayments involved in a Title IV sale. Generally, recipients fail to determine which Title permits them to enjoy a net foreign exchange, i.e. dollar, gain. One would expect the recipient country (assuming it is underdeveloped and needs capital goods imports), other things being equal, generally to negotiate for the program that maximizes its foreign exchange holdings, to the extent those holdings are affected by the decision. Thus, the country should weigh the saving of dollar exchange under Title I against the gain of dollar receipts under Title IV. This gain will be equal to or less than the U.S. loss--measured in dollar equivalency--of local currencies the United States would have received as its use portion under Title I. Similarly, the United States must measure its saving of dollar expenditures under Title I against the gain in dollar earnings under Title IV. Assumptions will have to be made as to possible reductions in U.S. expenditures if local currencies previously generated under Title I must now be purchased for dollars. To the extent that U.S. expenditures are reduced if a foreign currency is to be purchased for dollars rather than obtained through a surplus disposal program, the adverse effect upon the U.S. balance of payments is reduced. Also reduced is the favorable effect upon the balance of payments of the recipient country.

If institution of a Title IV program involves the elimination of programs previously financed specifically through Title I, it must be decided whether the shift is justified. This paper recognizes the possibility of curtailment or elimination of programs, but does not attempt to resolve this issue. If local currency can be obtained from other sources--such as mutual security sales of surplus U.S. military equipment--programs which otherwise would be curtailed or eliminated may continue. If the programs are curtailed or eliminated regardless, then such currency would reduce whatever dollar purchases of the currency were required as a result of the shift from Title I to Title IV.

This paper concerns itself only with the monetary aspects of P.L. 480 Titles I and IV. P.L. 480 should always be viewed in its total effect upon the recipient country and within the context of the total U.S. aid program in the country. An increase in capital formation may be the desired goal in

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4/ Using P + I - T = S, then $15 million + $1.2 million (interest at three-fourths of 1 percent for 20 years = $1,181,250) - $6.1 million (interest at 3-7/8 percent for 20 years = $6,103,140) = $10.1 million. Using C - S = L and rounding figures, $20 million - $10 million = $10 million.

using agricultural surpluses for economic development. If so, the surplus commodity aid should lead to an increase in investment, not simply a shift in programs to accommodate the surplus aid. Consumption should be additional and should be matched concurrently with additional investment. Generally, if consumption exceeds investment, capital formation is less; if investment exceeds consumption, inflation is likely in the short run. If commodities are sold domestically above world prices, consumption is uneconomic; if sold below domestic price levels, domestic suppliers may be harmed and resource allocation distorted. Thus, the impact of a P.L. 480 program can far transcend the monetary effects.

A Title I program is likely to be most beneficial in countries where: (1) official U.S. expenditures are small; (2) expected earnings of dollar or other convertible exchange are meager--both in the short run and long run; and (3) payment in local currency for surplus agricultural commodities under Title I can be provided for without disequilibrating domestic effects. If official U.S. expenditures are of such magnitude that a Title IV program could provide the recipient with a <u>net</u> dollar surplus after dollar payments for the commodities, Title IV obviously should become a possibility. The second condition for a Title I program would not be satisfied since official U.S. expenditures would provide the dollar exchange. The third condition depends, under all circumstances, upon the method of creating covering payment in local currency for the goods received.

The third condition should <u>always</u> be met. The handling of local currency, from the initial deposit against receipt of goods--including the creation and marshaling of the funds--to ultimate expenditure, should provide the maximum economic benefit to the developing country.

It is not practical to treat countries individually in this paper, although it must be done when determining programs. The author's treatment is general because the principles seem applicable to all countries having P.L. 480 programs, although the mechanics in each country vary. These mechanisms depend, among other things, upon the type of banking system, the existence or nonexistence of a central bank, its relation to the government, and the government's method of borrowing. This paper notes but does not investigate other possibilities that might arise. A government might adopt special pricing to reconcile P.L. 480 imports with its own agricultural subsidy programs. Or it may price commodities to the consumer at a level above that paid to the United States, plus a reasonable commission and profit charge. The latter operation could be deflationary if the government receives and holds the receipts.

<u>Internal Monetary Effects</u>

A Title I or Title IV program may be deflationary, inflationary, or both, depending upon the time periods. Initially the program is deflationary as payment draws funds from the transactions stream of the economy, assuming that there has been no creation of credit or money to provide the funds. The surplus agricultural commodities then represent a net addition to the supply of goods, without an accompanying addition to the money supply.

It now seems generally agreed that P.L. 480 does increase the resources available to recipients and to this extent the receiving countries gain. In earlier journal articles, several authors argued that the program was of no importance since a government could provide funds for economic development projects simply by running the printing press. However, even if funds were so created to pay for shipments, at least under Title I real goods were being provided.

To the extent that the United States or the recipient government withholds local currency receipts, the effect of the program continues deflationary. When funds return to the transactions stream of the economy the effect is inflationary, but the <u>net</u> effect, over the entire time period, is <u>neutral</u> assuming that the funds returned to the stream are equivalent in amount and impact to the funds withdrawn.

If the government expenditure results in a higher multiplier than a private expenditure of equal amount, the effect is inflationary; if in a lower multiplier, deflationary. If the government originally created the funds, i.e. pumped them into the transactions stream, to pay for the commodities, the effect of a P.L. 480 program cannot be deflationary; it could be neutral assuming neither the United States nor the recipient government spends its share of the proceeds. The effects of the program can be inflationary in the short and long run in varying degrees depending upon the ratio of credit expansion resulting from such expenditure, the multiplier of government expenditure, and the creation of real goods resulting from the government expenditure program.

The relative elasticity or inelasticity of the aggregate-supply function is obviously important. In an economy with a significantly inelastic aggregate-supply function any loan which leads to additional spending is inflationary.

Defining inflation as a rise in the domestic price level, expenditure by the United States or the recipients of large amounts of P.L. 480 generated currencies will most likely be inflationary in the short run, given the shortages of goods in underdeveloped countries. These expenditures will probably be inflationary in the long run for the same reason, but neutral in the long run if lower costs resulting from increased production permit the satisfaction of demand with goods produced to sell at price levels existing prior to the program.

Thus a P.L. 480 program can be managed to contribute toward offsetting deflationary pressures, containing inflationary pressures if such exist at the time the local currency holdings are accumulated, or to have a neutral effect. Monetary and fiscal policies in the recipient country, and cooperation of U.S. agencies holding the local currency, are primary determinants. This analysis holds for the handling of local currencies accumulated <u>either</u> under a Title I or a Title IV program. 5/

5/ A simple representation of these analyses may be made as follows:

Deflationary factors:
  P = Total price of commodities purchased by consumers in recipient country
  Mp = Multiplier associated with P (cont.)

Only in very rare cases, however, will the P.L. 480 program be of such magnitude as to have a major long-term influence on the general deflationary or inflationary trend of the economy. The short-term impact will, however, be of much greater importance. Table 2 shows that in seven countries in which the United States has implemented Title I programs, the value of agricultural commodities received in a given year has ranged between 1.3 percent and 9.1 percent of the value of the national incomes produced in the agricultural sectors. Table 3 shows that in six countries in which the United States has implemented Title I programs over a period of years, Title I funds released annually for investment have ranged from around 1 percent to 10 percent of the annual gross domestic capital formation.

To the extent that local currency lent to recipient countries is repaid to the U.S. Government in the same currency, the recipient country faces no foreign exchange problem arising out of external debt servicing. In contrast, since a Title IV program obligates a country to future dollar payments, a country's debt-servicing capacity may be of major importance in determining the advisability of a Title IV program. Conceivably, any increase in a country's debt-servicing burden may have a serious adverse effect upon the willingness of other lending nations to make additional loans. The addition of Title IV dollar repayments, even if modest, could reduce a country's chances of getting long-term industrial loans from other creditor nations. The problem of debt servicing is one that most underdeveloped countries face. The net foreign exchange gain (or loss) computation developed in tables 4-7 is an attempt to resolve the problem without resorting to value judgments on "bearability" of external debt.

A country receiving P.L. 480 aid under Title IV will usually, although not always, achieve a short-term gain in dollar earnings. The same country will in many instances achieve a long-term gain in dollar earnings. It may benefit from a Title IV program even in the absence of a projected long-term dollar gain if the assumption is correct that: (1) dollar repayments 8 to 10 years hence are easier to bear because economic development has meanwhile increased the power of the country to earn foreign exchange; and (2) the burden of these deferred payments does not outweigh the benefits of the short-term gain. Various illustrative situations, discussed in Sections II and III, confirm the above analysis. But the analysis does not apply in cases where previous Title I programs will provide local currency sufficient for U.S. needs for several future years. The facts in each case are controlling.

5/ (cont.)

Inflationary factors:

X = Expenditures of currencies by foreign and/or U.S. Government

Mx = Multiplier associated with X

If $P \cdot Mp > X \cdot Mx$, effect is deflationary

If $P \cdot Mp < X \cdot Mx$, effect is inflationary

If $P = X$, and

$Mp > Mx$, effect is deflationary

$Mp < Mx$, effect is inflationary.

Table 2.--Value of P.L. 480 commodities received as a percent of national income produced in the agricultural sector 1/--selected countries

Recipient country and year 2/	National income in local currency	Income produced in agricultural sector 1/		Exchange rate (units per dollar)	Agricultural income in U.S. currency	Title I shipments	
		Value in local currency	Percent of national income			Value in U.S. currency	Percent of recipient's agricultural income
	Millions	Millions	Percent	Units	Mil. dol.	Mil. dol.	Percent
Brazil (1958)............	1,046,200	282,420	27	210.14	1,344.0	24.997	1.8
Chile (1957).............	1,938	271	14	.625	434.1	14.921	3.4
Spain (1958).............	440,200	118,854	27	42.27	2,811.8	99.262	3.5
Yugoslavia (1959).........	2,269,000	612,630	27	632.00	969.4	88.560	9.1
Turkey (1957)............	26,623	12,247	46	2.80	4,373.8	56.577	1.3
India (1959).............	129,400	61,632	48	4.773	12,912.6	250.859	1.9
China (Taiwan) (1960).....	48,008	14,402	30	39.96	360.4	16.321	4.5

1/ Includes income produced in forestry and fisheries, since amounts for these sectors are not shown separately in source.

2/ Year shown is one in which P.L. 480 program was (1) of major significance and (2) data were available.

Date from United Nations Statistical Yearbook, 1961.

Table 3.--Title I funds released for investment as a percent of gross domestic capital formation in selected countries, 1955-1960

Country and year	Gross domestic investment 1/	P.L. 480 investment 2/	P.L. 480 share in capital formation
	Million U.S. dollars		Percent
Brazil			
1955	1,688	---	---
1956	2,027	---	---
1957	1,883	30.2	1.6
1958	1,490	---	---
1959	1,738	24.5	1.4
1960	2,066	---	---
Greece			
1955	351	---	---
1956	447	---	---
1957	508	15.4	3.0
1958	557	7.9	1.4
1959	641	9.5	1.5
1960	804	1.0	0.1
Israel			
1955	334	4.7	1.4
1956	377	11.0	2.9
1957	461	21.5	4.7
1958	498	32.3	6.5
1959	556	5.8	1.0
1960	579	19.8	3.4
Spain			
1955	1,710	---	---
1956	2,062	9.0	0.4
1957	2,324	---	---
1958	2,652	1.2	0.04
1959	1,718	56.1	3.3
1960	1,660	24.2	1.5
Turkey			
1955	1,055	---	---
1956	1,171	---	---
1957	1,018	---	---
1958	1,302	---	---
1959	838	2.1	0.3
1960	969	15.7	1.6
Yugoslavia			
1955	710	---	---
1956	729	---	---
1957	870	---	---
1958	929	90.5	9.7
1959	1,187	19.1	1.6
1960	1,108	19.9	1.8

1/ Includes increase in stocks except for Turkey and Yugoslavia.
2/ 104(e) and (g) funds.

Source: United Nations, Yearbook of National Accounts Statistics, 1961; International Monetary Fund, International Financial Statistics, May 1963; U.S. Dept. of Commerce, Foreign Grants and Credits by the United States Government, December 1956, 1957, 1958, 1959 1960, 1961.

Title I represents a short-run gain (assuming no dollar repayments under an alternative Title IV for 3 years--1 year for deliveries, 2-year grace period thereafter) to the U.S. balance of payments to the extent that: (1) U.S. possession of local currencies reduces dollar purchases of such currencies; (2) P.L. 480 transactions under Title I do not reduce the total amount of U.S. cash sales in the recipient country; 6/ and (3) there is only minor inflation of local prices while U.S. agencies expend their local currencies. This third condition has been given insufficient attention and is considered under the section of this paper comparing the merits of Titles I and IV from the point of U.S. interest.

Management of Accumulated Funds

Release of any large amounts of local currencies, accumulated and held over a period of years, may prove inflationary or seriously detrimental to the foreign exchange reserve position of a country. Inflation can discourage needed foreign investment and reduce export possibilities. On the other hand, careful and staged releases under appropriate conditions can prove beneficial. Ill-advised release of local currency which, in foreign exchange equivalents, exceeds the country's foreign exchange reserves at the time of the release, could cause serious difficulties. Pent-up demand for foreign exchange to pay for imports of foreign-produced capital goods could cause a demand for foreign exchange which, if satisfied to the limit of reserves, would exhaust reserves and make the currency of the country worthless for effecting international transactions. 7/

Releases of local currency can prove highly beneficial when appropriately timed. The United States in mid-1962 released $20 million equivalent in accumulated P.L. 480 local currency to a foreign agricultural bank. This was the first of four annual releases to total $80 million. The United States had withheld these funds during a period of inflation in the country. As a result of appropriate actions by the Central Bank, inflation was contained, the currency stabilized at a realistic level of value, and the foreign exchange position strengthened. Delaying such a release of local currency until an economy can benefit from increased credit can provide needed means for economic expansion. It has been the practice of the United States to take such action only after full consultation with, and approval of, the monetary authorities of the country concerned.

Another problem that some observers see arising out of Title I programs is the accumulation of local currency (cash balances and disbursed loans repayable in local currency, plus unexpended U.S. use funds) equal to a large

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6/ Even if cash sales of U.S. agricultural commodities are displaced, the net effect on the U.S. balance of payments will depend upon the degree to which dollars not spent on agricultural products are spent on other U.S. dollar goods. For a discussion of this point see (7).

7/ While such drastic results of unwise releases are not impossible, especially in some countries with very meager reserves, U.S. policy has been alert to prevent such occurrences.

percentage of a country's gross national product--approximately 11 percent in Yugoslavia, 10 percent in Taiwan, 9 percent in Israel, and lesser amounts in several other countries (4). Such large foreign-held amounts of a country's currency may theoretically pose a serious potential threat to its economic stability. But both the national interest and the international financial policies of the United States would seem to place the threat entirely in the realm of theory. Perhaps it would be wise psychologically to write off large excesses, provided no reasonable future U.S. need can be assumed. It may also prove useful to write off excesses as a reward for monetary virtue in the recipient countries. However, less responsible recipients will probably not be led into the paths of financial virtue and will continue to provide their own write offs through inflation.

Possible Loss of Dollar Earnings in Recipient Countries

A more immediate problem involved in large U.S.-held accumulations of a local currency is that the country may not realize dollar earnings if the United States need not purchase local currency to satisfy U.S. needs. By substituting commodities, the United States may in effect limit or exclude the other nation's earnings of dollar receipts, at least to the extent that usual dollar exchange transactions have been displaced. The problem becomes almost insoluble in cases where repayments of principal and interest from local currency loans continue over a long period of years to provide the United States with annual amounts of local currency equal to, or greater than, annual U.S. needs. 8/ Under such circumstances there can be no immediate gain in a country's dollar earnings when it shifts from Title I to Title IV, unless annual U.S. expenditures rise markedly above annual U.S. receipts of local currency. There may be a long-run gain in that ultimately these repayments cease and U.S. dollars do accrue to the country as a result of U.S. exchange purchases.

Generally, repayments cease when both principal and interest payments are credited to the U.S. Treasury accounts and are not re-lent in the country. Originally the recipients received, on the average, about 75 percent of the local currency proceeds from the domestic sale of the U.S. surplus agricultural products received under Title I. These proceeds were lent by the respective countries to their own nationals for economic development projects of various types. When these loans are liquidated the payments, both principal and interest, accrue to the United States. Legal authority for using these repayments has been confined to a general authorization for U.S. Treasury holdings of such foreign currencies to be sold to other U.S. agencies for appropriated dollars. These appropriated dollars, when so used, thus revert to the Treasury and do not become foreign exchange earnings of the country whose currency the Treasury holds and sells to another U.S. agency.

This is an obvious aid to the U.S. balance of payments. But it deprives the foreign country of the dollars. Suggestions have been made that the Treasury be permitted to use the funds for portfolio investment in respective

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8/ Loss of the opportunity to earn dollars from U.S. exchange purchases has been fully recognized; it is intended here only to emphasize the intractable nature of the problem arising out of continuing repayments (2) (6).

foreign countries or else establish revolving loan funds. Adoption of such suggestions would lead to short-run palliatives but not necessarily to long-run solutions. Funds would still ultimately revert to the Treasury. A more generous use of Presidential dispensation to reduce drastically, or even eliminate, the U.S. use portion of Title I local currency receipts would be one certain short-run aid to developing countries in gaining foreign exchange. Present difficulties with the U.S. balance of payments, on the other hand, justify the requests for larger U.S. use portions of Title I local currencies.

The United States faces the implications of continuing Title I programs in countries in need of dollars. It is clear that many of these programs in the short run deprive recipient countries of the opportunity to earn dollars from U.S. purchases of their currencies to cover U.S. needs in their countries. (See table 4.) In many cases this may be a modest price to pay for avoidance of immediate cash dollar purchases of the commodities; but it may be too high a price now that deferred payment is provided under Title IV. It is in the short run that the need of dollars is probably greatest. The need will likely continue in the long run. Unfortunately, reduced opportunities to earn dollars as the result of the mechanics of Title I may, and in many instances do, continue into the long run. 9/ Thus, Title I programs can give greater balance-of-payments advantages to the United States than to the recipient country. This is analyzed in Section II.

II

Title IV--Long-Term Supply Contracts (Deferred Dollar Payment)

Within the recipient country the method of providing funds for purchasing surplus commodities has the same effect under Title IV as under Title I. If the recipient country administers that portion of the local currency which under Title I would have been set aside for U.S. use, and now under Title IV accrues to it, the effect domestically is the same as would have resulted from U.S. expenditure of the U.S. use portion of the local currency.

The main points of difference considered under Title IV in comparison to Title I are: (1) the problem of dollar repayment by the recipient country; (2) the necessity for the United States to purchase local currency with dollars, thus adversely affecting, at least in the short run, the U.S. balance of payments; and (3) the possible saving in other U.S. lendings extended to Title I recipients to satisfy their foreign exchange needs, which may have arisen out of actual or expected growth.

The fact that Title I programs in the recipient countries lead to increased need of foreign exchange, and thus to a need for increased borrowings, has been mentioned in several articles. Some authors recommend that U.S.

9/ One analyst concludes: "The financial implications of P.L. 480 development loans will require...more serious study than they have received to date. If these loans continue to be emphasized, with the effect of reducing the availability of dollar loans and if the loan proceeds are used to replace dollar expenditures, the flexibility and acceleration of development programs may be seriously compromised." (8).

Table 4.--Effects of Title IV program on balance of payments of country in which United States holdings of local currency are large

Proposal: $25 million, 3-year Title IV program with 1-year delivery period and 2-year grace

Year	Program amount	Title IV repayments 1/ Principal (1)	Title IV repayments 1/ Interest (2)	Title IV repayments 1/ Total (3)=(1+2)	United States' purchases of local currency 2/ (4)	Dollar gain to recipient country 2/ (5)=(4-3)	Local currency accruing to U.S. 3/ (6)	Net dollar gain to recipient country (7)=(5-6)
	Million U.S. dollars							
1963	7.0	---	---	---	3.5	3.5	5.1	0
1964	9.0	---	0.05	0.05	3.5	3.4	5.2	0
1965	9.0	---	.10	.10	3.5	3.4	2.0+	1.4
1966	---	0.4	.20	.60	3.5	2.9	2.0+	0.9
1967	---	.9	.17	1.07	3.5	2.4	2.0+	.4
1968	---	1.5	.16	1.66	3.5	1.9	2.0+	0
1969	---	1.5	.15	1.65	3.5	1.9	2.0+	0
1970	---	1.5	.14	1.64	3.5	1.9	2.0+	0
1971	---	1.5	.13	1.63	3.5	1.9	2.0+	0
1972	---	1.5	.12	1.62	3.5	1.9	2.0+	0
1973	---	1.5	.11	1.61	3.5	1.9	2.0+	0
1974	---	1.5	.11	1.61	3.5	1.9	2.0+	0
1975	---	1.5	.10	1.60	3.5	1.9	2.0+	0
1976	---	1.5	.10	1.60	3.5	1.9	2.0+	0
1977	---	1.5	.07	1.57	3.5	1.9	2.0+	0
1978	---	1.5	.07	1.57	3.5	1.9	2.0+	0
1979	---	1.5	.06	1.56	3.5	1.9	2.0+	0
1980	---	1.5	.05	1.55	3.5	1.9	2.0+	0
1981	---	1.5	.04	1.54	3.5	2.0	2.0+	0
1982	---	1.5	.03	1.53	3.5	2.0	2.0+	0
1983	---	0.9	.02	0.92	3.5	2.6	2.0+	0.6
1984	---	.4	.01	.41	3.5	3.1	2.0+	1.1
Total	25.0	25.0	2.30	27.00	77.0	50.0	50.0+	---

Note: Do not add to totals in all cases due to rounding.

1/ Equal annual payments assumed.
2/ Assumes U.S. expenditures continue at approximately $3.5 million current annual rate with local currency purchased for dollars.
3/ Amounts for 1963 and 1964: U.S. Treasury estimates of accruals from previous Title I program. Estimates for later years not available but scheduled repayments on outstanding loans--principally 104(e) and 104(g)--will result in annual average receipts in excess of $2.0 million for several years to come.

dollar loans be provided as needed when Title I agreements are put into effect (1).

The problem of dollar repayment requires analysis of the external debt obligations of the country proposed for a P.L. 480 program and of its current and future debt-servicing capacity. Repayment over a 20-year period will usually result in modest annual installments. But even these may be unduly burdensome if: (1) the country is heavily burdened and has questionable capacity for increasing its foreign exchange earnings; (2) U.S. needs of local currency are modest; and (3) the country's need for P.L. 480 food aid is continuing.

The low rate of interest, usually three-fourths of 1 percent, and the grace period ease the burden. The possibility of scheduling repayments in other than equal annual installments offers further relief. Annual payments may be set very low in a series of years following the grace years. This reduces the dollar repayment burden to a token minimum for the first 6 or 7 years of the agreement, while the country increases its receipt of unencumbered dollars, i.e. earned rather than borrowed foreign exchange.

If U.S. receipt of local currency, arising out of previous Title I program loans, is expected to be sufficient to cover U.S. needs for several years, the short-term gain in dollar earnings under a Title IV program cannot be achieved by the recipient country. But the ultimate gain under Title IV may justify cessation of Title I. Such a judgment will not be easy. In too many cases the ultimate gain is probably so far in the future that Title I will continue to be the best program under the given circumstances.

Case Analysis of Title I-Title IV Advantages

The case developed in tables 4 and 5 suggests almost all situations in which a reasonable, if not entirely quantifiable, measurement can be made to support the advisability of substituting Title IV for Title I.

Table 4 shows that in the absence of scheduled U.S. receipts of local currency arising out of previous Title I programs (col. 6), a 3-year Title IV program of $25 million would provide the recipient country with both a short-term and long-term gain in dollar earnings, even if repayment is in equal annual increments. Over the repayment period, the net gain would be $50 million (col. 5). More important, almost $16 million would be gained in the first 5 years (col. 5: 1963-67). At no time during repayment would annual installments under Title IV exceed dollar receipts gained as a result of foregoing Title I. The gain would be larger to the extent that U.S. expenditures (col. 4) rose above the estimated amount, smaller to the extent they declined. The gain would also be smaller to the extent the United States had other sources of local currency, e.g. surplus military equipment, to sell. A shift to reasonable rather than equal annual installments, making payments smaller during the first 3 to 5 years of repayment, would increase short-term gains.

Harder terms, i.e. larger initial payments with no grace period, would reduce the short-term gains. If a recipient country agreed, terms of Title IV repayment could be sufficiently hard to give the United States the same, or greater, short-run balance-of-payments advantages as a Title I with a large

Table 5.--Effects of Title IV program on balance of payments of country in which United States holdings of local currency are large

Proposal: Four consecutive $25 million, 3-year Title IV programs, each with 1-year delivery period and 2-year grace

Year	Program amount	Title IV repayments 1/ Principal (1)	Interest (2)	Total (3)=(1+2)	United States' purchases of local currency 2/ (4)	Dollar gain to recipient country 2/ (5)=(4-3)	Local currency accruing to U.S. 3/ (6)	Net dollar gain to recipient country (7)=(5-6)
	Million U.S. dollars							
1963	7.0	---	---	---	3.5	3.5	5.1	0
1964	9.0	---	0.05	0.05	3.5	3.4	5.2	0
1965	9.0	---	.10	.10	3.5	3.4	2.0+	1.4
1966	7.0	0.4	.20	.60	3.5	2.9	2.0+	0.9
1967	9.0	.9	.22	1.02	3.5	2.5	2.0+	.5
1968	9.0	1.5	.26	1.76	3.5	1.7	2.0+	0
1969	7.0	1.9	.35	2.25	3.5	1.2	2.0+	0
1970	9.0	2.4	.36	2.76	3.5	0.7	2.0+	0
1971	9.0	3.0	.39	3.39	3.5	.1	2.0+	0
1972	7.0	3.4	.47	3.87	3.5	-.4	2.0+	0
1973	9.0	3.9	.47	4.37	3.5	-.9	2.0+	0
1974	9.0	4.5	.50	5.00	3.5	-1.5	2.0+	0
1975	---	4.9	.57	5.47	3.5	-2.0	2.0+	0
1976	---	5.4	.52	5.92	3.5	-2.4	2.0+	0
1977	---	6.0	.47	6.47	3.5	-3.0	2.0+	0
1978	---	6.0	.44	6.44	3.5	-2.9	2.0+	0
1979	---	6.0	.41	6.41	3.5	-2.9	2.0+	0
1980	---	6.0	.36	6.36	3.5	-2.9	2.0+	0
1981	---	6.0	.33	6.33	3.5	-2.8	2.0+	0
1982	---	6.0	.30	6.30	3.5	-2.8	2.0+	0
1983	---	5.4	.25	5.65	3.5	-2.2	2.0+	0
1984	---	4.9	.23	5.13	3.5	-1.6	2.0+	0
1985	---	4.5	.19	4.69	3.5	-1.2	2.0+	0
1986	---	3.9	.14	4.04	3.5	-0.5	2.0+	0
1987	---	3.4	.13	3.53	3.5	---	2.0+	0
1988	---	3.0	.07	3.07	3.5	0.4	2.0+	0
1989	---	2.4	.07	2.47	3.5	1.0	2.0+	0
1990	---	1.9	.05	1.95	3.5	1.5	2.0+	0
1991	---	1.5	.03	1.53	3.5	2.0	2.0+	0
1992	---	0.9	.02	0.92	3.5	2.6	2.0+	0.6
1993	---	.4	.01	.41	3.5	3.1	2.0+	1.1
Total	100.0	100.0	9.0	109.00	108.5	-0.5	50.0+	---

Note: Do not add to totals in all cases due to rounding.
1/ Equal annual payments assumed for all four agreements with interest at three-fourths of 1 percent.
2/ Assumes U.S. expenditures continue at approximately $3.5 million current annual rate with local currency purchased for dollars.
3/ Amounts for 1963 and 1964: U.S. Treasury estimates of accruals from previous Title I program. Estimates for later years not available but scheduled repayments on outstanding loans--principally 104(e) and 104(g)--will result in annual average receipts in excess of $2.0 million for several years to come.

U.S. use component. If a U.S. balance-of-payments advantage is sought, either a Title I or IV might provide the advantage. Which Title is preferable for the purpose can only be decided upon after terms of alternative programs are established. A $10 million Title I program with a 25 percent U.S. local-currency use portion would not be as beneficial as a $10 million Title IV program with a 30 percent repayment in the first year. It is difficult to believe, however, that these terms would be equally acceptable to the recipient country.

Assuming that the recipient country would spend the almost $16 million for imports that otherwise would have required borrowings--and this is a sound assumption in the developing countries--then interest on almost $16 million is saved. This is a further gain to the recipient country. Since the interest rate may run as high as 5-3/4 percent, a significant additional burden would be imposed on the country. With no U.S. accruals and holdings of local currency, the case developed in table 4 would be adverse to the U.S. balance of payments, both short and long term. But it would be less adverse to the extent U.S. expenditures declined, for whatever reason.

Even when available local currency exceeds U.S. needs (as indicated in tables 4 and 5) there may be some U.S. purchases of the local currency for dollars. This results from the fact that in several countries where the U.S. accumulates local currencies from Title I operations there has been a need for such purchases when accruals at a particular time of the year are insufficient fully to cover U.S. local currency obligations due at that time. In 1962, total U.S. expenditures in a country similar to the example country amounted to $3.5 million; $2.4 million in local currency was available as needed. Timing of accruals and disbursements, however, required purchases of $1.1 million of the local currency. Because of this, no total can be given for column 7 in tables 4 and 5, and amounts for individual years are only approximate.

If a country is faced with a continuing need for P.L. 480 programs, the long-term burden of Title IV repayments may outweigh the short-term gain in dollar earnings as a result of foregoing Title I. It is difficult to conceive of a country that would not enjoy the short-term gain under any conditions. Only in a country where food needs are massive and U.S. local currency needs almost insignificant would this be the case, considering up to 6 years as short-term, i.e. a period within which principal repayments, however modest, would begin. In such a case Title I seems preferable, provided the United States sees no serious disadvantage to accumulating excess local currency.

Table 5 is based on the assumption that a recipient country has a long-term need for P.L. 480 aid. Four successive programs of $25 million each would mean that over the period of repayment the country would break even in its dollar transactions (col. 5). The short-term gain of approximately $16 million is thus not obtained at the cost of long-term loss. If only two successive Title IV programs of $25 million each are required, the short-term gain would remain; at long term the country would enjoy a small gain. At any time, it is important to identify the primary balance-of-payments interests, both of the United States and of the recipient country. It is also important to determine whether short-, medium-, or long-term considerations should

receive paramount emphasis. An estimate of future need for P.L. 480 is required to determine whether short-term gains will be outweighed by long-term burdens. Even if additional Title IV programs bring about a net loss, this may be acceptable if the burden of estimated future debt servicing is not considered unbearable, or if the general advantages from economic development arising out of the short-term gain are sufficient to offset the net loss. Obviously, value judgments enter the analysis at this point.

If there are either large U.S. holdings or expected large accruals of a foreign currency, the analysis may be only of academic interest. However, the framework of analysis can be used in any country where a P.L. 480 program is considered. For each proposed P.L. 480 Title IV agreement a tally sheet such as those in tables 4 and 5 can be constructed to provide quantified measurements. These can help determine the advisability of Title IV programs. Case-by-case analysis is mandatory, but certain general guides can be given.

When data are obtained for a country considered for a P.L. 480 program, a simple formula can be used to determine the net dollar gain or loss, in either the short or long run, which would result from a Title IV program:

Let: (1) R_{p+i} = Repayment (principal and interest) in U.S. dollars of Title IV credit, over the period of agreement (up to 20 years), or any segment of years within the period.

(2) E = U.S. dollar purchases of local currency for U.S. uses (alternatively provided from Title I), over the period of agreement or any segment of years within the period.

(3) L = Local currency, in U.S. dollar equivalent, obtained through Title I (either U.S. use portion or principal relent to country, or both), available during Title IV repayment period, or any segment of years within the period.

(4) L_o = Local currency, in U.S. dollar equivalent, obtained from sources other than Title I, available during Title IV repayment period, or any segment of years within the period.

Data are developed for: (1) from amount and terms of proposed Title IV; for (2) from U.S. Government estimates; for (3) and (4) from U.S. Treasury or other U.S. agency records. Using the data, six basic situations are shown in table 6. Variations in individual cases are to be expected, depending on the data.

In cases where value judgments may be required, the type of commodity obtained under Title IV may be of some interest: Cotton being an industrial raw material may be more important for economic development than consumable foods. However, these may contribute to the country's economic development by increasing human energies. Except in those cases requiring value judgments (3 and 6 of table 6) there is no need to take into account the commodity composition of the P.L. 480 program or the external debt of the recipient country.

Table 6.--Formula for determining advisability of Title IV programs

Case	Condition existing during repayment period		Recommended program
	No L or Lo	L or Lo	
1.......	E $>$ R p+i	---	Title IV
2.......	E = R p+i	---	Title IV
3.......	E $<$ R p+i	---	Depends on amount by which E $<$ R p+i, and judgment of short- versus long-run effects 1/
4.......	---	E-L and/or Lo $>$ R p+i	Title IV
5.......	---	E-L and/or Lo = R p+i	Title IV
6.......	---	E-L and/or Lo $<$ R p+i	Depends on amount by which E-L and/or Lo $<$ R p+i, and judgment of short- versus long-run effects 1/

1/ If, for instance, net gains in the first 5 years are measured against the net loss over the entire period of a 20-year program, the recommendation would depend upon the weight given to short-term gain and long-term loss. If E5 $>$ R (p+i)5 by $10 million, but E20 $<$ R (p+i)20 by $1 million, it might well be argued that the short-term gain far outweighs the long-term loss, the gain in the first 5 years leading to development which more than offsets the long-term loss. This could be the case where Title IV terms are easy in the first 5 years (grace period and minimum principal repayments), harder in the succeeding 15 years, during which period U.S. expenditures are foreseen as declining. If E5 $>$ R (p+i)5 by $10 million, but because of additional Title IV requirements E20 $<$ R (p+i)20 by $10 million or more, then judgment would be more difficult. The possible results upon which decision rests are almost infinite, but can be determined in each concrete case by the simple formulas above. Availability of records reduces reliance on assumptions, although even the best computations will of necessity involve estimates of future variables. In segment analysis the same segment will of course be used in each variable of the formula.

The gain in dollars is evident (2 and 5 of table 6 assume some beneficial development from the short-term dollar gain). The recipient country obtains a net advantage either in the immediate or distant future, whatever the good or commodity financed long term, and whatever its external debt burden may be.

A Title IV program has sometimes been adopted instead of a Title I program to help resolve difficulties that countries with multiple currency rates face in satisfying requirements of the "Ellender Amendment." Sec. 101(f) added to P.L. 480 legislation on August 8, 1961, provides that the rate of exchange applicable to the sale of commodities under Title I should not be less favorable than the rate at which U.S. Government agencies can buy currencies from the U.S. Disbursing Officer, usually a rate for capital and other invisible transactions. A country may maintain, however, that some other less depreciated rate is appropriate. The provisions of the "Ellender Amendment" would still require deposit at the U.S. Disbursing Officer's rate, thus necessitating a larger deposit of local currency by the recipient country. Title IV avoids the issue of selecting the legally required rate. However, no progress is thereby made toward unifying and stabilizing the recipient country's exchange rate at a realistic level, i.e. a rate in line with the country's internal price and cost levels. But the magnitude of most P.L. 480 programs is probably not sufficient to force financial and fiscal responsibility conducive to providing the means of liquidating dollar obligations under Title IV. The magnitude also is not sufficient to force the unification of a rate at a realistic level if the United States insists on a Title I program and refuses, or threatens to deny, Title IV. (Even large P.L. 480 programs rarely exceed 10 percent of a country's annual imports, scarcely providing sufficient leverage to force rate unification.)

In most cases replacement of Title I by Title IV programs will result in adverse balance-of-payments effects for the United States, at least in the short run. These can be partly or fully offset to the extent that dollars obtained by a country from U.S. purchases of local currency required for U.S. uses are spent to increase its purchases in the United States or to relieve the United States of the need to continue dollar loans or make new ones as might be desirable or necessary from the Title I recipient's standpoint. It seems safe to assume that most developing countries will want dollar loans even if they enjoy a net gain of dollars when Title IV replaces Title I. This assumption requires case-by-case analysis and testing to determine its significance in this analysis.

III

Case Comparisons--Titles I and IV

Two hypothetical-country case studies demonstrate relative balance-of-payments merits of Title I and Title IV programs from the point of view of the United States and of the recipient country when local currencies are exhausted, almost exhausted, or committed.

Case I: U.S. diplomatic and military expenditures in Country A are assumed to have been at an average annual level of U.S. $50-55 million for several years, divided approximately evenly between the two uses. Large Title I programs have generated all or most of the local currency required for U.S. uses through mid-1963. Assuming the United States would have purchased for dollars the local currency required, the annual average saving in the U.S. balance of payments has been $50-55 million if three additional assumptions are verifiable: (1) that no unanticipated expenditure of U.S. dollars was required to satisfy needs for local goods as a result of value depreciation of the local currency obtained from Title I and held against future purchases; (2) that Title I sales did not displace cash sales of U.S. agricultural commodities, or if they did that Country A spent an equal amount of dollars it would not otherwise have spent on other U.S. goods and services; and (3) that no reduction in U.S. expenditure would have resulted if dollar purchases of local currency had been required.

The first assumption seems tenable. Assuming that 1958 is validly used as the base year (1958 = 100) and using the cost-of-living index of Country A as a measure of price inflation, the index numbers for subsequent years were 107, 109, 111, and 117. 10/ Since the first quarter of 1962 the index has moved sharply upward (June, 1963 = 126). This probably reduces the purchasing power of the yet-unexpended Country A currency held in U.S. accounts. The major rise in the cost-of-living index occurred in 1959 (7 percent), was less than 2 percent per year in the following 2 years, and rose 6 percent in 1962. The actual loss in purchasing power would depend on: (1) how accurately the cost-of-living index reflected price increases in goods obtained locally for U.S. uses; (2) the extent to which prices fixed by contract (e.g. wages) applied to U.S.-consumed goods and services; and (3) the degree to which lower-cost goods and services could be substituted. U.S. requirements, especially military, are probably for low-cost labor and raw materials. The wholesale price index may thus be a more meaningful measure of price inflation as it affected the value of unexpended local currency held by the United States. If so, the loss of value may be much less than that based upon measurement against a cost-of-living index. Wholesale price indexes generally rise more modestly in given periods. Some hedge may have been provided by fixed contract arrangements, but substitution of lower-cost goods and services would not seem of major importance.

Where the United States has a plentiful supply of local currencies--for 2 years or more--the need to spend dollars because depreciation prevents coverage of scheduled local expenditures is not immediate and may be postponed, more local currency being used to compensate for price increases. 11/ Future needs can be reviewed and reduced. But the real goods available to the United States for a given amount of local currency are less than what would have been

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10/ Throughout this example data of a country to which Country A is assumed roughly to correspond have been used.

11/ U.S. holdings of currencies of Burma, India, Indonesia, Israel, Pakistan, Poland, the Syrian Arab Republic, the United Arab Republic, and Yugoslavia were determined by the Treasury Department to be in excess of foreseeable U.S. requirements for fiscal year 1962 (9).

obtained had no depreciation occurred. Even when local currencies are bought for dollars through exchanges, the United States faces such a loss to the extent that price increases in the domestic economy are not immediately reflected in adjusted exchange rates.

As for the second major assumption, some of the commodities supplied under Title I to Country A may have been bought for cash, probably from the United States. Country A's cash purchases of such commodities rose markedly from approximately zero in 1959 to around $25 million in 1960, and to about $65 million in 1961. Title I values in the same years declined from $83 million to $65 million to $50 million. Had Title I sales declined more, cash sales may have risen a similar or somewhat less amount. Even if there was some displacement of Country A's cash purchases of U.S. agricultural commodities, it seems safe to assume that dollars thus saved by a developing country would be spent largely on other goods--tractors for instance--produced in the United States. Such magnitudes are difficult to measure, but the total amount of dollars spent in the United States by a developing country is not likely to be reduced as the result of a Title I program. The percentage of surplus agricultural commodities provided under Title I which, in the absence of Title I, would have been purchased for cash may range from zero to 100. For most analyses, a percent closer to zero is probably more realistic. For Country A the figure may be between 10 percent and 25 percent, but this is only a guess. 12/

In 1962, the trend of Country A's cash sales remained upward. Such a trend can partly reflect excellent economic progress by a country during the years from which the trend was determined. In addition, it may be taken as evidence of the successful development of another market for U.S. agricultural commodities. As a result of these developments--favorable both to the economic growth of Country A and to U.S. trade--no further Title I programs would likely be planned for this country.

In the absence of local currencies obtained through Title I, U.S. expenditures might be reduced in a time of U.S. balance-of-payments deficits. While basic diplomatic and military needs must be satisfied, some special programs might be eliminated. Future requirements may be more modestly stated. Annual U.S. expenditures may fall from the $50-55 million level to a somewhat lower level.

Thus, if our assumptions are correct, the balance-of-payments saving resulting from Title I can be projected at a rate of $50-55 million per year or less, to the extent annual U.S. expenditures decline. Such a conclusion seems reasonable, given only a modestly rising price level in Country A, and the indeterminacy of future U.S. expenditures once local currencies available through Title I are exhausted. To the extent U.S. agricultural or industrial goods and services sold for cash provide dollars to purchase local currency previously supplied from Title I programs, the net effect on the U.S. balance of payments approaches zero. A zero or neutral effect is achieved when additional cash sales for dollars equal the value of dollar purchases of local currency for U.S. uses previously covered by funds obtained through Title I programs.

12/ See (7) for a discussion of the limits of Title I displacement of dollar sales.

There is no question that Title I sales benefit the U.S. balance of payments and aid the recipient country's development. But it seems desirable that the United States earn dollars for local currency purchases, since trade and foreign exchange transactions of the two countries would then be carried on through normal commercial and exchange channels. The United States can, of course, aid its balance of payments through many adjustments within either a Title I or a Title IV program. Assuming a recipient country agrees, the United States can improve its position under Title I by (a) increasing the U.S. use portion of local currency, (b) accelerating repayment of 104(g) loans, and (c) supplying excess currencies for U.S. tourist purchases. Under Title IV the U.S. position improves as prompter repayment or larger downpayments can be effected. Without need of agreement by the recipient country, the United States can aid its balance of payments in the short run by shifting, where legislatively permissible, excess restricted-use funds obtained through Title I programs to deficient unrestricted-use accounts.

The benefit or disadvantage to Country A's balance of payments is exactly the reverse of the adverse or beneficial effect on the U.S. balance of payments. Thus, if there is no increase in U.S. cash sales to Country A when Title I programs are terminated, the U.S. balance-of-payments loss would be $50-55 million or less. The gain to the balance of payments of Country A would be $50-55 million or less.

Case II: The case of Country B reinforces the analysis and assumptions of Case I. The same assumptions apply with the same conclusions arising out of the assumptions. The case reveals that even in the face of a country's increasing ability to use dollars for a Title IV agreement, a Title I program is more to the advantage of the U.S. balance of payments--certainly over the next 2 to 3 years. Cash purchases seem unlikely to increase significantly in the absence of Title I. Conversely, Country B would gain from replacing the Title I program with a Title IV. 13/

U.S. expenditures in Country B are assumed to be at the average annual rate of $10 million, covered by past accumulations of, and current additions to, Title I local currencies. Purchase for dollars of the needed local currency might bring about a reduction in annual U.S. expenditures so that the saving to the U.S. balance of payments may be at a lower level. Future Title I programs, if agreed, most likely will not provide more than $4-5 million annually. This is probably more realistic than $10 million as an annual rate of U.S. balance-of-payments savings under future Title I programs. Thus, even with a Title I program, dollar purchases of local currency will rise. At

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13/ It has been argued that in many countries no political party could, without serious repercussions, use dollar credits to pay for perishable goods even though the country would thereby gain dollar exchange. Sometimes, the fact that a neighboring country receives massive Title I shipments also influences views. However, as argued in this paper, credit purchases of anything--even hula hoops--for dollars would be justified if a country thereby increases, by more than the dollar cost of such purchases, dollar earnings arising out of U.S. dollar purchases of local currency previously generated out of local currency purchases of hula hoops.

the $4-5 million annual rate over a 3-year period, this would be a $12-15 million saving of dollars to the United States; conversely, a gain in like amount would fail to materialize in the balance of payments of Country B.

However, let us assume that Title I would have provided for future U.S. local currency needs and that Country B takes commodities of equal value under Title IV and avails itself the permitted 2-year grace period following a normal 1-year allowance for deliveries. Then the United States would be forced to purchase for dollars the needed local currency, with a net gain to Country B of approximately $30 million in dollar earnings in these 3 years. Even assuming continuing Title IV programs in Country B, a net annual gain would accrue --although at a diminishing figure after the first 3 years--until annual payments on Title IV indebtedness (i.e. on all Title IV agreements) equaled or exceeded the amount of U.S. dollar expenditures on local currency otherwise provided through Title I. Country B would enjoy this gain in dollar earnings, even after paying out dollars for Title IV repayments, by receiving in larger amounts dollars from U.S. purchases of local currency to cover U.S. expenditures. The assumption can be, and in the case of certain P.L. 480 countries ought to be, made that even Title IV will not be offered if cash sales are considered appropriate. The gain or loss in the balance of payments of the United States and any other country (X) then depends on the amount of U.S. expenditures in X, their flexibility, the amount of other cash purchases by X in the United States, the amount of diversion of such purchases to third countries, and the ability of X to satisfy its own needs.

Let us assume that a $40 million 1-year Title IV program is introduced in Country B instead of a Title I program of like amount (the amount necessary to provide $10 million for U.S. use, assuming a U.S. use portion of 25 percent). Then, even if Country B required P.L. 480 aid for the next 5 years, it would enjoy a net gain in dollars over the entire period of repayment of debt incurred under all programs, although not necessarily in each individual year. Assuming 5 Title IV agreements (each totaling $40 million and concluded in 5 successive years, each with a normal 2-year grace period after completion of delivery requiring 1 year), Country B would enjoy in the first 7 years a net gain in dollar earnings amounting to $46 million, as shown in table 7. Only in the eighth year would Country B's dollar repayments under Title IV exceed its dollar receipts arising out of U.S. expenditures previously made out of U.S. use local currency. This assumes in all years a constant level of U.S. expenditures. At no time would annual repayments exceed annual receipts by more than $2 million, abstracting in all years from interest costs of three-fourths of 1 percent, the normal rate in most Title IV agreements. 14/

Grace periods and reasonable rather than equal annual payments are added advantages for Country B under Title IV. These provisions are especially advantageous if dollar debt servicing is heavy in immediately future years and

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14/ When interest payments at a rate of three-fourths of 1 percent are included, the total repayment on all agreements increases to $220 million, leaving Country B with a net overall gain of $20 million. The short-term gain of $46 million in the first 7 years is reduced to $40.4 million when interest payments are included.

Table 7.--Effect of five successive annual Title IV agreements in Country B, each agreement for $40 million, repayable in equal annual installments over a 20-year period, including period of grace

Year	Repayable under agreement no. 1	2	3	4	5	Principal repayments (total)	U.S. dollar expenditures 1/	Net gain to balance of payments: United States	Country B
	Million U.S. dollars								
1	2/ ---	3/ X	X	X	X	0	10.0	-10.0	+10.0
2	---	---	X	X	X	0	10.0	-10.0	+10.0
3	---	---	---	X	X	0	10.0	-10.0	+10.0
4	2.4	---	---	---	X	2.4	10.0	-7.6	+7.6
5	2.4	2.4	---	---	---	4.8	10.0	-5.2	+5.2
6	2.4	2.4	2.4	---	---	7.2	10.0	-2.8	+2.8
7	2.4	2.4	2.4	2.4	---	9.6	10.0	-0.4	+0.4
8	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
9	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
10	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
11	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
12	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
13	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
14	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
15	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
16	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
17	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
18	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
19	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
20	2.4	2.4	2.4	2.4	2.4	12.0	10.0	+2.0	-2.0
21	X	2.4	2.4	2.4	2.4	9.6	10.0	-0.4	+0.4
22	X	X	2.4	2.4	2.4	7.2	10.0	-2.8	+2.8
23	X	X	X	2.4	2.4	4.8	10.0	-5.2	+5.2
24	X	X	X	X	2.4	2.4	10.0	-7.6	+7.6
Total						4/ 204.0	240.0	-36.0	+36.0

1/ To the extent U.S. dollar expenditures are reduced or the amount of the Title IV program increased, the net gain to Country B's balance of payments declines. If an alternative Title I program is provided in Country B but is not large enough to produce local currency sufficient to cover U.S. needs, Country B would earn dollars under Title I to the extent the United States purchased local currency to cover the deficiency. 2/ --- = Delivery and grace periods. 3/ X = No agreement. 4/ Adding rounded figures in first five columns gives total in excess of $200 million ($40 million X 5).

if the use by Country B of total local currency proceeds (as provided under Title IV) accelerates economic expansion, making Title IV repayments easier to bear at a later date. It should also be recognized that expenditure by the United States of its portion of local currency proceeds in Title I countries may also, and generally does, contribute to development in these countries.

In supplying foreign exchange needed for development, dollars earned by Country B in the absence of Title I programs may reduce the need for other borrowings in the United States (3). If this occurs, the balance-of-payments advantage to Country B of a Title IV over a Title I is less than otherwise assumed. Conversely, the effects of Title IV on the U.S. balance of payments are less adverse. But it is hard to conceive of any set of circumstances under which Title I benefits Country B more than Title IV, in the short, intermediate, or long term. In the past the United States has sold some surplus military equipment in several countries to provide local currency. But future sales of any significant magnitude in Country B are not assumed and other sources of local currency are not foreseen. The estimated gain of a Title IV program seems reasonably accurate.

Conclusions on Balance-of-Payments Effects

Except in the cases of countries in which the United States holds or can expect to accumulate large amounts of local currencies for many years to come, most countries seem likely to fall roughly in the pattern of Countries A and B. Thus, the decision, from the point of view of the United States, on whether Title I or Title IV is preferable can rest upon the determination of whose balance of payments needs assistance. When this decision is reached, the magnitude of the program and the proposed terms of repayments will permit the weighing of two factors, both short and long run. One factor is the U.S. balance-of-payments savings obtained through acquiring foreign currencies under Title I procedures and correspondingly reduced dollar earnings by the foreign countries whose currencies are so acquired by the United States. The other is the increased dollar purchases by the United States of required foreign currencies and correspondingly increased dollar receipts by the countries whose currencies are purchased. Allowances in both cases should be made for offsetting effects suggested in the foregoing analysis.

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